

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP2004/009405

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 F04B49/025 F04B23/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 F04B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	DE 36 07 466 A (BLUM, ALBERT) 24 September 1987 (1987-09-24) column 1, line 60 - column 2, line 41 column 3, line 15 - column 4, line 26 figures 1,2	1-4
Y	FR 2 767 875 A (ASKOLL HOLDING S.R.L.) 5 March 1999 (1999-03-05) Title page 5, line 34 - page 6, line 18 figure 1	1-4
A	DE 198 30 416 C (HANNING & KAHL GMBH & CO.) 9 December 1999 (1999-12-09) column 2, line 13 - column 3, line 10 figure 1	1
	----- -/--	



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- * & * document member of the same patent family

Date of the actual completion of the international search

2 December 2004

Date of mailing of the international search report

21/12/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax (+31-70) 340-3016

Authorized officer

Gnüchtel, F

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP2004/009405

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 324 171 A (LIBERTY PUMPS) 28 June 1994 (1994-06-28) column 1, line 6 - line 49 column 4, line 44 - column 6, line 54 figure 1 -----	1
A	EP 1 136 701 A (TECUMSEH PRODUCTS COMPANY) 26 September 2001 (2001-09-26) paragraph '0001! - paragraph '0003! paragraph '0010! - paragraph '0011! column 3, line 39 - line 42 -----	1

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP2004/009405

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
DE 3607466	A	24-09-1987	DE 3607466 A1	24-09-1987
			WO 8705367 A1	11-09-1987
			EP 0259397 A1	16-03-1988
FR 2767875	A	05-03-1999	IT PD970188 A1	04-03-1999
			IT PD970296 A1	30-06-1999
			DE 29815163 U1	10-12-1998
			FR 2767875 A3	05-03-1999
DE 19830416	C	09-12-1999	DE 19830416 C1	09-12-1999
US 5324171	A	28-06-1994	NONE	
EP 1136701	A	26-09-2001	US 6499961 B1	31-12-2002
			BR 0101150 A	23-10-2001
			CA 2341822 A1	24-09-2001
			CN 1316681 A	10-10-2001
			EP 1136701 A1	26-09-2001